



Shoe Basin mine cleanup in progress

Project aims to boost Snake River water quality

BY BOB BERWYN
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What's your take?

Based on the success of the Shoe Basin project, should Summit County tackle more abandoned mine cleanups without waiting for federal Good Samaritan legislation? Let us know by clicking "comments" above and writing your opinion.

SUMMIT COUNTY — While lawmakers and EPA officials last month touted their excruciatingly slow progress toward enacting Good Samaritan legislation that could ease liability burdens for abandoned mine cleanups, Summit County's open space department was moving ahead with the final stages of some real, on-the-ground remediation high in the Peru Creek Basin.

After several years of mapping and planning, Lakewood-based American Geological Services is reclaiming some of the land affected by historic mining operations at the abandoned Shoe Basin Mine, up toward the headwaters of Peru Creek. Working with loaders and backhoes, the crew has already reshaped the pile of waste rock near the entrance to the mine and routed a flow of clean water from nearby wetlands around the tailings to try and reduce the amount of dissolved heavy metals reaching burdened Peru Creek.

The old mine dump is currently being covered with earth and will eventually be capped with rocks to look like one of the many natural rockslides in the high alpine valley. Wetlands affected by the mine site and reclamation work will also be restored. The work should be done by the end of August, including a newly reconfigured trailhead parking lot for access to the Continental Divide Trail, said Brian Lorch, the Summit County resource expert who led the charge on the Shoe Basin project.

The nearby Pennsylvannia Mine site has been identified as one of the big sources of pollution in the Snake River drainage, but Lorch said one computer model showed that the work at the Shoe Basin site could lower metals loading significantly, helping with the overall water quality in the basin by keeping up to five pounds of zinc per day out of the stream.

Acid mine drainage and natural sources of metals have resulted in elevated concentrations of zinc, cadmium and other metals — to the point that some reaches of the Snake River area listed as impaired under the Clean Water Act. The metals don't pose an acute hazard to human health, but zinc, in particular, is toxic to trout.

The Effects

Work at the Shoe Basin mine site will

Project history

Lorch said the Shoe Basin cleanup was spurred by a couple of factors, going back several years when Arapahoe Basin first proposed a new snowmaking

Summit County resource expert Brian Lorch, right, stands at the Shoe Basin mine site with American Geological Services, Inc.'s Rocky Johnson, center, and Jack Johnson, far left. The Johnsons are capping the old pile of mine waste with soil and rocks and have rerouted a trickle of clean water away from the tailings to try and improve water quality in the Snake River Basin. The work will have a temporary effect on motorized use of the area. The sign will be erected near Cinnamon Gulch in the next few days.
Summit Daily/Bob Berwyn



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affect traffic on the Peru Creek Road through the end of September. The road will be closed to motorized traffic at Cinnamon Gulch, with recreational access permitted through the construction zone. Call Summit County open space at (970) 668-4060 for more info.

operation. A Forest Service analysis of A-Basin's snowmaking plan showed that the ski area's diversions from the clean North Fork (a tributary to the Snake) would slightly up the concentrations of metals downstream. As part of the approval process for snowmaking, A-Basin agreed to contribute \$20,000 toward a cleanup at some other site in the basin, with the goal of offsetting the impacts of the North Fork diversion.

That \$20,000, along with a state of Colorado volunteer cleanup grant in the same amount, is paying for the remediation, Lorch said. But the lead-up to the project was much more involved. Land ownership in the upper Snake River basin is a quilt of mining claims interspersed with national forest, and before the county signed on as the lead entity for the Shoe Basin project, there was an extensive survey effort to pinpoint the abandoned mines and to determine which sites could be cleaned up.

That Peru Creek brownfields assessment was groundbreaking in its own way, Lorch said, explaining that brownfields projects more typically involve the reclamation of industrially scarred urban lands. With grant funding, the county worked in partnership with state and federal agencies to identify 300 potential cleanup sites, and divided them into several categories, including "clean" sites, and "untouchables," where the liabilities associated with federal environmental laws make cleanups a daunting proposition. The nonprofit Trust for Land Restoration also played a key role in the process, Lorch said.

Until then, the county's open space program hadn't looked closely at the Snake River Basin, despite the high recreational values of the area, Lorch said.

"OSAC (the county's open space advisory council) wasn't interested," he said, explaining the cost merely of assessing the sites for environmental hazards often exceeded the purchase price of the land.

"To me, it didn't make sense to give up on the basin, and in effect, that's what we were doing," Lorch said.

Based on the comprehensive assessment of the area, the county has since bought about 15 parcels in the Snake River Basin, always trying to avoid sites with huge liability concerns and helping to ensure public access to the spectacular backcountry above Montezuma.

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